

BACKGROUND FOR EDITORS

COMPOUND DOCUMENT ARCHITECTURE

One of the biggest challenge business people face is how to get the information they need in a usable form as fast as possible. With applications written to the Digital CDA (tm) (Compound Document Architecture) specification, users will be able to:

- o get information from anywhere in their company -- within sites, enterprise wide and worldwide -- with a seamless integration of applications;
- o exchange information -- including text, graphics, charts, images, spreadsheets, charts and tables -- with the same ease and transparency as ASCII provides for the interchange of today's text files, and;
- o use any type of operating system or desktop device to send and receive information across and between enterprises.

Results for businesses will include: better decision making; more accurate information with increased control over it; and increased productivity, efficiency and profitability. Companies will be able to respond faster to a competitive market with virtually no duplication of efforts and, therefore, less chance for market share to be lost while waiting for vital information to be published.

Digital is the first vendor to offer these capabilities to users. The CDA program as part Network Application Support information sharing services delivers on Digital's strategy to integrate the enterprise.

The CDA architecture is an integrated, open architecture (set of conventions, protocols and directions) for creating revising, managing and distributing revisable compound documents across heterogeneous systems and applications. Compound documents contain text, graphics, images, spreadsheets, charts and tables. Future versions of the CDA specifications will also support voice and full-motion video.

LiveLinks From Source To Document

The CDA specification provides the means for interchanging compound documents across multiple platforms and operating systems -- including VAX/VMS, VAX/ULTRIX, MS-DOS, OS/2 and Macintosh -- on an enterprise-wide DECnet/OSI network. DECnet, which is based on the Open Systems Interconnection (OSI) international standard, will provide the transparent connection that links work groups whether they are local or distributed.

Rather than a bottom up approach to standards that calls for tweaking existing products, Digital took a hard look at what users need now and what they will need in the future. By doing so, Digital was able to develop a framework upon which future products can be built.

At the January 10, 1989 Desktop announcement, Digital demonstrated the powerful CDA capabilities with unique DECwindows applications: DECwrite, a compound document editor combining WYSIWYG word processing, electronic publishing, drawing and business graphics; DECdecision, a decision support application providing distributed data access, built-in spreadsheet and business graphics; and VAXimage, a series of scanning utilities

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providing image capture, manipulation and integration. These applications demonstrate one of the dynamic capabilities of the CDA architecture -- LiveLinks between CDA compliant applications. These links allows information that running in an applications program, such as a spreadsheet, to be linked to the information in the compound document. As changes are made in the spreadsheet, the user can choose to have the information in the document automatically updated.

CDA Application Development by Third Parties

Applications implementing the CDA architecture now provide users with revisable information interchange and seamless application integration. To encourage the development of CDA-compliant applications, Digital supports third party application developers with a program that includes the following components:

- o CDA Manual -- a technical description and blueprint of the CDA conversion architecture and tools. This public document is available to all developers.
- o CDA Toolkit -- simplifies software development. Several leading developers have already developed applications using this toolkit. The toolkit and documentation is a standard component in the current releases of the VMS and ULTRIX operating systems.
- o Training and Technical Support -- including a toll free support number and world wide training courses provide the support necessary to developers in a manner they can use.

Industry leading document processing and electronic publishing vendors were the first to commit to develop applications, conversion facilities and LiveLinks using the CDA specification. They included: Apple, Aldus, Interleaf, Kodak, Datalogics, Information Dimensions.

Recently, Digital announced commitment from more than 40 vendors who have applications that reach beyond information management systems -- from Polygen Corp., which will support CDA with its Laboratory Notebook solution; from Odesta, which will develop a CDA-based version of its document management system; and from Keyword Office Technologies, a developer of word processing and document conversion software, which will develop DDIF converters for these applications. And now some of those commitments have turned into products, such as Computer Associates Inc. with CAsuperImage and Chemical Design Limited who have a product which uses DECwrite as it's database user interface.

Commitment to Standards

The CDA specification is consistent with the direction of the key emerging international standard ODA/ODIF (Office Document Architecture/Office Document Interchange Format). Digital actively participates in all major standards committees and efforts, including the International Standards Organization (ISO), and will accommodate new standards as they develop.

By supporting open standards and participating in standards efforts, Digital protects customers' and application developers' investments, and ensure that today's solutions will remain consistent with new standards as they emerge.

Today's Compound Documents vs. Tomorrow's Compound Documents

Examples of compound documents today are books, newspapers, magazines and catalogs. These are ordinary to us, but time consuming, complex and expensive to publish. Published information requires long lead times and specialized skills of writers, editors, artists, designers, translators, typographers, printers and others -- all working together in the traditionally labor-intensive, detail oriented business of publishing.

Information is manually collected, assembled and processed using specialized systems. Last minute changes are difficult, costly and sometimes impossible. The result is final, non-revisable hard copy, with the possibility that the information will be out of date even before it gets to print.

With CDA compliant applications, many kinds of information from many sources on the network will be collected, assembled, revised and processed electronically into compound documents. This is because of the architecture's robust interchange format.

Digital's format, called Digital Document Interchange Format (DDIF), provides a standard format for seamlessly interchanging networked, compound documents. It defines content, structure and attributes of the document. Digital's Tabular Interchange Format (DTIF) is the interchange standard for storing and interchanging revisable-form tabular data and spreadsheets, and supports LiveLinks to applications such as the decision support software DECdecision.

Using DDIF as an interchange hub, non-compliant applications already written can take advantage of the CDA benefits by using file format converters provided by the CDA Converter Library or by third-party converters.

The Future

Though many visionaries predicted that computer technology would lead to a paperless office, we are still drowning in paper-based information. While the preferred medium for documents may change from paper to electronic, enterprises will need a way to control and distribute information that is meaningful to the intended receivers of that information.

The Digital CDA open specification and the CDA compliant applications demonstrate a technological breakthrough and a major step in that direction. The advent of applications written to that specification is the proof of that breakthrough.

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Note to Editors:

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